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L2 ANSWER 1 OF 1 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 1990-088782 JAPIO
TITLE: PRODUCTION OF DIAMOND-COATED MEMBER
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PATENT INFORMATION:

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APPLICATION INFORMATION

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ABSTRACT:

PURPOSE: To easily produce the title diamond-coated member having excellent adhesion by selectively vapor-etching a binder of Co, etc., on the surface of a cermet substrate, and thereby forming a diamond film on the substrate surface.

CONSTITUTION: The cermet substrate 3 with the surface coated with a binder consisting of Co and/or Ni is set in a reaction vessel 2, the vessel 2 is depressurized by a vacuum pump 5, and a gaseous etchant contg. at least one kind among carbon monoxide, water, and gaseous hydrogen halides is introduced from an inlet pipe 1. The substrate 3 is then heated to a specified temp. by a heater 7, a plasma is produced from a microwave power source 4 through a waveguide 6, and the surface of the substrate 3 is etched. When the etching is finished, a diamond film forming gas is supplied to the reaction vessel 2 from the inlet pipe 1 to produce plasma, and a diamond film is formed on the surface of the substrate 3. By this method, a diamond-coated member having excellent adhesion is easily obtained in a short time.

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